RETIREMENT INCOME POLICY: CONSIDERATIONS FOR EFFECTIVE DECISION MAKING

An EBRI Issue Report

EMPLOYEE BENEFIT RESEARCH INSTITUTE
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The Employee Benefit Research Institute (EBRI) currently is developing a series of reports designed to fill short-term needs and to provide the base for a long-term approach with regard to decisions involving retirement income policy. The series has been designed to provide private and public sector decision-makers with tools they need to effectively address individual issues as they arise and develop a complete information base needed for future comprehensive retirement income policy research and decisions.

A two-volume bibliography issued by EBRI in 1979 provides an extensive listing of recent research in the retirement income area as a first step in defining the areas in which additional research is most needed.

This issue report takes the second step in defining future research needs by providing a method of determining the adequacy of existing information and by providing analytical standards with which to approach future research efforts.

In addition, this report offers an evaluation strategy that can be applied to information used to make day-to-day decisions as well as long-term comprehensive policy decisions. Specifically, the report demonstrates the need for definitional, categorical, and analytical precision in evaluating individual reports or documents and provides guidelines to help achieve such precision.

The need for an evaluation strategy, and particularly for definitional clarity, when approaching retirement income issues was highlighted recently during a seminar held by the Aspen Institute for Humanistic Studies. The conference concluded that it is essential "to clarify confused definitions that have confused planning of pension programs and comparisons between them."

The evaluation techniques outlined in this report will be applied to EBRI reports issued over the coming years and to reports issued by other groups and commissions. The remaining reports in this series will complete the foundation for future research planning by pinpointing specific research needs and by developing a priority system for execution so that the results of those research efforts are as timely and useful as possible.

This report was prepared for EBRI under contract by ICF Incorporated. In addition, many other persons and organizations made contributions to earlier drafts, and to them EBRI extends its thanks.

Dallas L. Salisbury
Executive Director
March 1980
INTRODUCTION

A. EVALUATING THE INPUT: THE FIRST STEP

Each day we are confronted with new survey reports, studies, panel recommendations and policy proposals intended to inform us about, or to alter and improve, public and private retirement income programs. Before any decisions can be made based on this material and the data already available, decision-makers must assure themselves that the real problems have been identified, that related issues have not been ignored, and that the treatment of an issue has been adequate and thorough. This issue report is designed to guide concerned persons through this necessary evaluation process so that major policy questions can be addressed adequately.

Effective evaluation of any existing or forthcoming material on retirement income issues requires precision in three areas. First, the meanings of the terms used to describe a policy issue or proposal must be clear. One term may imply different concepts and consequences under the different types of retirement income programs and confusion over the intended meaning of the term could produce mistaken conclusions.

Second, specific retirement policy issues must be identified precisely so that they are evaluated in light of related issues and alternatives. If an issue were considered to be a problem of determining who should pay for a benefit, but in fact were an issue of benefit adequacy, then it would not be evaluated in the correct context of information and considerations. Again, mistaken conclusions could result.

A final area requiring precision is that of determining whether the material presented or available is complete or whether further data or
studies are needed. If a decision is based on inadequate information, conclusions also are likely to be inadequate.

This issue report is designed to help concerned persons and decision-makers identify and resolve potential definitional problems, integrate individual proposals into a broader more meaningful framework, and determine where further research or analysis are needed before a decision should be made.

B. THE IMPLICATIONS OF ERROR

Over the last fifty years, retirement income programs have increased in importance as sources of income during retirement. For example, while the total population over age 65 increased at an annual rate of approximately 2 percent between 1960 and 1979, the number of Old Age Survivors Insurance (OASI) recipients increased at an average annual rate of approximately 5 percent -- from 14 million to approximately 34 million beneficiaries during this period. Beneficiaries of privately-administered plans increased even more rapidly, from approximately 2 million in 1960 to approximately 9 million in 1979, representing an average annual growth rate of over 8 percent.

The combined impact of a growing retired population and increasing benefit levels has produced a large increase in total retirement program benefit payments. Table 1 shows that the increase in retirement income plan payments over the 1950-75 period outstripped the increase in Gross National Product (GNP). Retirement program disbursements increased from approximately 1.3 percent of GNP in 1950 to 6.3 percent of GNP by 1975.

Because of the increasing significance of retirement income programs, public attention has turned to the broader economic effects of these programs. For example, the question of whether contributions to retirement income programs represent a real increase in total savings or
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>OASI</td>
<td>$ 961</td>
<td>$ 4,968</td>
<td>$ 10,677</td>
<td>$ 16,737</td>
<td>$ 28,796</td>
<td>$ 58,509</td>
</tr>
<tr>
<td>SSII</td>
<td>1,454</td>
<td>1,488</td>
<td>1,626</td>
<td>1,594</td>
<td>1,866</td>
<td>2,516</td>
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<tr>
<td>Federal Civil Service</td>
<td>266</td>
<td>428</td>
<td>893</td>
<td>1,438</td>
<td>2,752</td>
<td>7,207</td>
</tr>
<tr>
<td>Military</td>
<td>331/</td>
<td>442</td>
<td>893</td>
<td>1,386</td>
<td>2,853</td>
<td>6,239</td>
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<tr>
<td>State and Local</td>
<td>320</td>
<td>722</td>
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<td>2,008</td>
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<td>7,490</td>
</tr>
<tr>
<td>Subtotal Public</td>
<td>$ 3,132</td>
<td>$ 8,048</td>
<td>$ 13,114</td>
<td>$ 23,163</td>
<td>$ 39,905</td>
<td>$ 81,961</td>
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</table>

<table>
<thead>
<tr>
<th>Privately Administered</th>
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<th></th>
<th></th>
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<tr>
<td>Pension and Profit Sharing Plans</td>
<td>370</td>
<td>850</td>
<td>1,720</td>
<td>3,520</td>
<td>7,360</td>
<td>14,810</td>
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<tr>
<td>Total All Programs</td>
<td>$ 3,702</td>
<td>$ 8,898</td>
<td>$ 16,874</td>
<td>$ 26,683</td>
<td>$ 47,265</td>
<td>$ 96,771</td>
</tr>
<tr>
<td>GNP</td>
<td>$286,200</td>
<td>$399,300</td>
<td>$506,000</td>
<td>$688,100</td>
<td>$982,400</td>
<td>$1,528,800</td>
</tr>
<tr>
<td>Program Outlays As Percent of GNP</td>
<td>1.3%</td>
<td>2.2%</td>
<td>3.3%</td>
<td>3.9%</td>
<td>4.8%</td>
<td>6.3%</td>
</tr>
</tbody>
</table>

a/ Estimates for 1950 through 1970 reflect payments under the Old Age Assistance program (OAA) which was replaced by Supplemental Security Income (SSI) in 1974; 1975 estimates reflect payments only for aged recipients.

b/ Military data are actually for 1952 because 1950 data not available.

merely a substitution of institutional for personal savings is the subject of intensive study by economists in the field. Another economic issue concerns the broader effects of retirement income programs on the labor force participation decisions of potential workers.

These issues underscore the importance of evaluating the adequacy of current public policies in the retirement income area, and of estimating the impact of alternative policies on a broad set of economic factors.

C. A FRAMEWORK FOR EVALUATION

The trends in retirement income programs have raised a number of complex public policy issues. Specific issues have become the focus of studies by Congressional staff and by individual agencies, advisory councils and commissions in the Executive Branch. We can expect the results of these efforts to improve public awareness of the problems and to provide a range of potential solutions to these problems.

However, before taking action on these proposals, policy-makers must ensure that specific solutions address all of the policy issues in an integrated fashion. Such an approach suggested in this report organizes the major policy issues into three fundamental questions:

- **Goals**: What retirement income levels should be established for individuals during retirement? This broad question encompasses the two major policy issues of how to determine the adequacy of retirement income benefits and how to define retirement for purposes of establishing eligibility for retirement benefits.

- **Strategy**: What mix of private and public programs should be used to achieve these income levels? This question requires an assessment of the adequacy of existing opportunities for individuals to receive a retirement benefit. Where gaps exist, policy-makers will have to address the policy issues of whether new alternatives should emphasize mandatory or voluntary participation and whether participants should earn benefits or receive them as a societal right. Where
unintended overlaps in programs occur, policy makers will have to determine how to coordinate them.

- **Financing:** Who should pay for these retirement income programs? This broad question raises the related policy questions of whether each generation should pay for its own retirement benefits, how different age and income groups should share the costs of these programs and who should bear the risk of funding inadequacies. Addressing these issues will establish whether existing and proposed retirement income policies are affordable and identify how these policies affect the economy.

Organizing the various retirement income issues into these categories permits the consideration of related issues in a coordinated fashion, while reducing the broader issues into individual problems of manageable size. The discussion in each chapter uses this structure to organize the key points.

This report focuses on the definitional issues, the policy issues and the analytical issues inherent in addressing the problems of retirement income programs. Chapter I reviews a number of terms and definitions which may have several meanings and which are frequently misunderstood or misused. The discussion also identifies the potential impact of alternative definitions and interpretations.

Chapter II reviews in greater detail the proposed framework for evaluating policy issues and proposals in the retirement income area. This section identifies the broad issues and discusses the related sub-issues. This chapter also suggests a series of key questions to assist decision-makers in their review of the issues.

Chapter III reviews a number of policy proposals currently being developed or considered, identifies further research needs and establishes analytical standards for evaluating the proposals and conducting the research.
CHAPTER I
THE NEED FOR DEFINITIONAL PRECISION

A. THE CRUCIAL LINK BETWEEN INTENTION AND INTERPRETATION

The absence of clear definitions can often impede the resolution of complex policy issues. Effective decision-making requires definitional precision in order to identify the real problems and select appropriate alternatives.

For example, differences in interpretation of the term coverage may produce different conclusions regarding both the adequacy of private pension plan protection and the reasons why certain groups of workers lack coverage. As a result, proposals to expand coverage may differ in the relative emphasis placed upon stimulating new plan formation, as opposed to liberalizing participation requirements of existing plans.

In other instances, the full meaning of a proposal may require the qualification of potentially ambiguous terms. For example, evaluating retirement income in terms of replacement of preretirement income requires specifying whether the replacement levels reflect pre-tax or after-tax rates or other measures of spendable income, whether preretirement income reflects final or career-average earnings and whether retirement income reflects income from only one source or all sources.

Finally, the use of terms with precise technical meanings may create confusion when used in more general discussions of retirement income programs. For example, some may mistakenly regard the term unfunded liability as referring to a legal financial liability of a plan sponsor, rather than as an actuarial estimate of a plan's current level of funding using a particular actuarial cost method.
Because of these potential problems, this chapter emphasizes the importance of precision in the use of terms and definitions and highlights the potential effects of failing to do so.

B. TERMS AFFECTING RETIREMENT INCOME LEVELS

Establishing retirement income goals and objectives presumes a common understanding of the circumstances under which retirement occurs and the likely financial needs and resources of individuals during retirement. This section reviews the following terms which are frequently used in discussing retirement income levels:

- retirement
- adequacy
- equity
- retirement benefits
- replacement rate
- accrual rate
- inflation
- benefit indexing

Despite the fact that technical differences in the meaning of each term may be small, these variations may imply large differences in retirement income objectives or program costs.

1. Retirement

Alternative accepted definitions of retirement produce different numbers of potential retirees, which in turn will affect the expected costs of a proposed retirement income policy.

The term retirement traditionally refers to voluntary withdrawal from the workforce after completing a number of years of full-time employment or reaching a customary retirement age. However, retirement can also
occur under a variety of circumstances and over a broad range of ages. For example:

- **voluntary retirement** can occur over a wide range of ages due primarily to:
  - variation among retirement plans in the age at which they pay full accrued benefits,
  - provisions for early retirement that make workforce withdrawal economically feasible at younger ages, and
  - recent amendments to the Age Discrimination in Employment Act (ADEA) that extended the permissible mandatory retirement age.

- **involuntary retirement** can occur for workers reaching mandatory retirement age. But, it can also occur at younger ages due to poor health, disability or extended unemployment.

- **partial retirement** can occur when workers withdraw from full-time employment with a pension plan benefit, but continue in the workforce through part-time employment.

The Social Security system clearly establishes normal retirement at age 65 and reduced early retirement at age 62. Private sector plans, federal civil service and military retirement systems and state and local government retirement systems have no such uniform retirement ages. In essence, each plan defines its own retirement age and service structure.

With regard to the private sector, ERISA requires that normal retirement age be not later than age 65. On the other hand, Title IV of ERISA guarantees defined benefit pensions, up to the accrued normal benefit, commencing at any age specified by the plan sponsor (or sponsors).

The fact that retirement can occur under different circumstances underscores the importance of precision in defining eligibility for retirement benefits. In addition, the degree to which policy makers
emphasize objective measures of retirement eligibility (such as age or service) or more subjective measures (such as health status) will affect the potential range of benefits and costs under a proposed policy.

2. Adequacy

The adequacy of retirement benefits generally refers to whether benefit levels satisfy the economic needs of individuals during retirement but no widely-accepted objective standard exists for evaluating adequacy. In the abstract, adequate benefit levels provide enough income to meet the required living expenses of program beneficiaries. However, conceptual and empirical difficulties limit our technical capacity to determine unambiguously the economic needs of individuals in retirement.

Researchers have previously employed two different criteria in evaluating the adequacy of retirement income benefits. As a standard representing the minimum level of income necessary for subsistence, the Bureau of Labor Statistics (BLS) provides periodic estimates of budgets for an elderly couple under various assumptions. However, these estimates have a number of limitations that illustrate the difficulty of developing and maintaining reasonable income standards. For example, the BLS estimates have little sensitivity to regional variations in the cost-of-living, reflect few changes in consumption patterns over time, and allow for little variation in family structure.

Alternatively, decision-makers can measure the degree to which retirement incomes maintain the level of disposable income achieved prior to retirement. However, these comparisons can vary substantially under alternative definitions of income. In addition, they do not reflect the availability of personal savings and other assets that individuals can use to meet their needs. Although these two criteria may suggest similar incomes for lower income retirees, they imply widely different income
goals for other groups. Thus, the definition of adequacy has a major impact on retirement benefit levels.

3. **Equity**

Equity generally refers to the fairness with which retirement income programs pay benefits and allocate costs among different groups in the population, but the concept of fairness is subject to a broad range of interpretations.

In applying the term to income transfer programs, some may consider equity to mean the provision of exactly the same dollar amount to every individual. However, because individuals will have different costs of living due to their individual performance or factors beyond their control, equal benefit payments may produce a potentially inequitable distribution of discretionary income. Therefore, the concept of equity generally stresses equality of treatment in relation to a specified standard of need or individual performance.

The application of this broad standard to individual retirement income programs may take very different forms depending upon the objectives of the program:

- a defined benefit pension plan designed to provide deferred compensation will tend to stress the principle of equal benefits for equivalent work histories to ensure equity of total compensation after retirement; such plans frequently take into account the benefits provided by Social Security;

- a defined contribution plan will tend to provide equal contributions for equivalent work histories to ensure equity of total compensation before retirement; the amount of contributions frequently takes into account the benefits provided by Social Security;
• a public welfare program designed to correct inequities in the overall distribution of income will tend to achieve equity by providing for minimum subsistence needs, adjusted for family or health circumstances.

• Social Security combines aspects of a deferred compensation plan and a welfare plan and tends to achieve equity by providing benefits that are related to workforce attachment and earnings up to a specified maximum in a way that favors low wage workers rather than being strictly proportional.

With respect to the effects of inflation after retirement the concept of equity has not yet been widely embraced outside the Social Security system and other governmental retirement systems. Sponsors of private sector plans have been guided more by their financial ability than by strictly equitable standards.

Thus, the development of an equitable retirement income policy can imply different objectives for individual programs.

4. Retirement benefits

The term retirement benefits commonly refers to income received during retirement from Social Security or from an employer-sponsored retirement plan. However, individuals may supplement income from these programs with savings or other personal assets.

The major sources of retirement income include:

• Social Security, a government sponsored program of social insurance designed to provide cash income to workers and spouses upon withdrawal from the workforce because of retirement, disability or death.

• private and public employee retirement plans, employer sponsored plans which provide cash benefits upon age and/or service-related retirement. Examples include:
-- defined benefit pension plans which provide a specified benefit upon retirement;

-- defined contribution plans, such as profit sharing, money purchase and thrift plans, to which a specified annual amount of employee compensation or profits is contributed to a retirement fund; and,

-- individual plans, such as Individual Retirement Accounts (IRAs), which permit workers without an employer sponsored plan to set aside a portion of their compensation for retirement.

- personal savings, an important stock of assets that provides annual income to retirees and that affords a source capital for consumption or gifts.

Other sources also provide income during retirement. For example, Supplemental Security Income (SSI) or public welfare programs are not commonly considered retirement income programs but they represent an important source of income for some retirees. Similarly, disability benefits and unemployment or worker compensation benefits supplement the incomes of some retirees. Finally, non-cash benefits from a variety of programs may have the same effect as cash benefits by reducing the level of income necessary to maintain a certain standard of living. Examples of these other sources of support include:

- Medicare and Medicaid
- food stamps
- favorable tax treatment
- veteran's assistance
- Federal Nutrition Program

This broad range of potential retirement benefits suggests the importance of including all major programs when evaluating the adequacy of retirement income.
5. Replacement rate

This term refers to the proportion of pre-retirement income replaced by income during retirement but rates can vary substantially with different definitions of pre- and post-retirement income. Therefore, the use of this term requires substantial precision to reduce potential ambiguity that can result.

When replacement rates are used to reflect the relationship between pre- and post-retirement standards of living, replacement rates will vary with the specific sources of retirement income included in the numerator, as well as the sources of pre-retirement income included in the denominator. To illustrate, Table I-1 shows the percentage of pre-tax

<table>
<thead>
<tr>
<th>Measures of Pre-retirement Income (in denominator)</th>
<th>Measures of Retirement Benefits (in numerator)</th>
<th>OASI</th>
<th>OASI and Private Pension</th>
<th>OASI, Private Pension and Other Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salary Only</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Final Year</td>
<td></td>
<td>37.3%</td>
<td>63.3%</td>
<td>77.7%</td>
</tr>
<tr>
<td>• Final 5 Year Average</td>
<td></td>
<td>41.8</td>
<td>70.9</td>
<td>87.0</td>
</tr>
<tr>
<td>All Income</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Final Year Salary and Employee Benefits</td>
<td></td>
<td>27.6</td>
<td>46.9</td>
<td>57.6</td>
</tr>
<tr>
<td>• Final Year Salary, Employee Benefits and Other Income</td>
<td></td>
<td>25.0</td>
<td>42.4</td>
<td>52.0</td>
</tr>
</tbody>
</table>

**SOURCES:** Business Roundtable Study of Retirement Levels, Costs and Issues, prepared by TPF&C, August, 1978; estimates for a single worker retiring on January 1, 1979 at age 65 with 30 years service under a pension plan with a benefit of 1.67 percent x high five year average pay x years of service, less 1.67 percent x applicable Social Security benefit x years of service.
pre-retirement income replaced by post-retirement benefits for a worker assumed to retire at age 65 in January 1979 with $15,000 final salary and an earnings history with 5 percent annual growth. As shown, replacement rates from Social Security benefits are approximately one-half of the rates from all sources of retirement benefits.

The table also indicates the sensitivity of replacement rates to the level and composition of income prior to retirement, as reflected in the denominator. Specifically, these rates vary with the:

- definition of pre-retirement income, commonly represented by annual wages or salary; however, other earned and unearned income sources may contribute substantially to total pre-retirement income.

- averaging period, where longer averaging periods can often produce lower estimates of pre-retirement earnings because previous years' earnings are often, though not always, lower than those in the year prior to retirement.

In addition, replacement rates differ substantially if they reflect after-tax rather than pre-tax incomes. After tax incomes may provide a more realistic measure of disposable income than pre-tax incomes. However, the use of after tax incomes to assess income adequacy tends to increase replacement rates. For example, the pre-tax replacement rate of 77.7 percent on final year's salary would increase to an after tax replacement tax rate of 88.0 percent. Because of potential ambiguity, replacement rates should be defined with care.

6. Accrual rate

This term refers to the rate at which a worker earns or accumulates a retirement benefit. Retirement programs typically use accrual rates when retirement benefits reflect a form of deferred compensation. Most pension plans, either explicitly or implicitly, employ some form of
accrual rate. However, other programs, such as Supplemental Security Income (SSI), provide benefits to individuals over age 65 on the basis of current income need, regardless of earnings history.

Many pension plans have explicit accrual rates which directly relate annual retirement benefits to years of service. The unit of accrual may be either a percentage of final average salary per year of service or a specified dollar amount per year of service. Other plans that provide a fixed benefit at a specific age or after a minimum number years of service do not have an explicit accrual rate. However, they implicitly assume that the worker earns a portion of the fixed benefit each year.

All defined contribution plans have an implicit accrual rate reflecting each year's contribution.

Two definitional issues arise in the use of accrual rates. First, in defined benefit plans that use explicit accrual rates (for example, one that pays a benefit of 1.5 percent of final salary per year of service), one cannot establish a uniform replacement rate for all workers because the replacement rate changes with years of service. And, second, the use of cost-of-living adjustments (COLAs) or indexing to change initial benefits may tend to diminish the role of accrual rates in making retirement benefits a form of deferred compensation. Certain difficulties arise in viewing the accrual rate concept when plans are amended with increased benefits applied to previous years of service. The concept of an accrual rate disappears in such situations, with resulting problems in such areas as plan termination insurance provisions of ERISA.

Thus, decision-makers should weigh carefully the implications of accrual rates in establishing retirement income objectives.
7. **Inflation**

This term refers to the change in purchasing power created by price increases that are not due to corresponding increases in the quality or the available choices of goods and services but existing measures of inflation may not adequately reflect retirees circumstances.

The Bureau of Labor Statistics (BLS) uses the Consumer Price Index (CPI) as a measure of the rate of change in inflation. However, while reflecting price increases of a market basket of goods and services, the CPI may overstate or understate an individual's ability to offset these increases without a change in his standard of living, such as, by substituting alternative goods and services or by changing the timing of purchases. In addition, many persons do not frequently engage in all of the transactions measured by the CPI, such as the purchase of a home. Despite these imperfections, the CPI is the most commonly used measure of inflation.

Because retirees typically purchase a different mix of goods and services than younger segments of the population, some suggest that the CPI may not track the effect of inflation on retirees' standards of living. To address this problem, they suggest the use of price indices that specifically reflect retiree's circumstances. Such a retiree price index could account for differences in the importance of certain items between the budgets of retirees and the population as a whole. And, they could also adjust for the impact of non-cash benefits such as Medicare on retirees' standards of living.

8. **Benefit indexing**

This term refers to a variety of possible post-retirement benefit adjustments that attempt to offset the impact of inflation on retirees' standards of living. However, a major issue concerns whether any
broad-based index can accurately reflect changes in the cost of living for specific cohorts of retirees.

One approach employs a price index such as the CPI to establish the periodic change in retirement benefits needed to maintain their initial purchasing power. Many employer-sponsored plans try to accomplish the same result using ad hoc adjustments in retirement benefits. However, because Social Security benefits are indexed in relation to the CPI, a significant portion of retirees' benefits already possess such inflation protection.

Nevertheless, some erosion in purchasing power can occur. For example, Table I-2 illustrates the potential change in replacement rates over a ten-year period that arises from a 4 percent annual rate of change.

### TABLE I-2

<table>
<thead>
<tr>
<th>Assumed Pre-Tax Final Pay</th>
<th>After Tax Replacement Rate At:</th>
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<tbody>
<tr>
<td></td>
<td>Retirement (Age 65)</td>
</tr>
<tr>
<td>$ 7,500</td>
<td>78%</td>
</tr>
<tr>
<td>10,000</td>
<td>80</td>
</tr>
<tr>
<td>15,000</td>
<td>80</td>
</tr>
<tr>
<td>20,000</td>
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<td>30,000</td>
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<td>40,000</td>
<td>67</td>
</tr>
<tr>
<td>50,000</td>
<td>66</td>
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</table>

SOURCE: Business Roundtable Study of Retirement Benefits Levels, Costs and Issues, prepared by TPF&C, August, 1978; estimates reflect replacement rates for a worker retiring with 30 years service at age 65 in 1979; and they assume a 4 percent inflation rate and the same private pension benefit formula used in Table I-1.
in the CPI. This example assumes that retirees receive a Social Security benefit indexed to the CPI and a fixed private pension benefit. The table shows that such a rate of inflation can substantially erode the purchasing power of initial retirement benefits. Because many private plans do provide ad hoc benefit adjustments, partial indexing or supplemental plan benefits, this example may overstate the potential decline in replacement rates.

This example raises several definitional issues about indexing. First, the mix of indexed and fixed benefits currently varies by income level, with the Social Security benefit typically representing the major portion of cash retirement income for retirees with low wage histories. As a result, these retirees may have significant protection from inflation during retirement. However, beneficiaries with high earnings histories may receive somewhat less protection from inflation unless offset by diminution of personal savings, because OASI benefits typically comprise a smaller portion of their total retirement income. As a result, the potential need for benefit adjustments to protect against inflation varies substantially by income level.

Second, the practice of indexing retirement benefits to the CPI or other broad index may not provide the most appropriate pattern of benefits during retirement. For example, if actual living expenses decline during retirement, retirees with indexed benefits will experience a substantial increase in their standard of living. Indexing benefits may ensure that average benefits for the average retiree are adjusted for inflation, but indexing to the average may not achieve the desired result for individual retirees.
C. TERMS AFFECTING THE MIX OF RETIREMENT PROGRAMS

Existing retirement programs provide a range of opportunities for individuals to earn or obtain retirement benefits, but confusion may arise in evaluating the existing mix of programs simply because of differences in definitions.

In many cases, workers have an opportunity to earn both Social Security benefits and pension benefits under an employer-sponsored plan. Workers without such opportunities can save for retirement through Individual Retirement Accounts (IRAs) or Tax Sheltered Annuities (TSAs). Those without significant work experience can rely on their spouses' benefits or other public programs such as Supplemental Security Income (SSI).

The current mix of retirement programs generally stresses labor force participation as the basis for receiving retirement benefits. Decision-makers can change this emphasis by altering the mix of programs or the standards that affect participation in individual programs. To address the definitional issues, this section reviews the following terms:

- employment
- coverage
- participation
- vested participation
- portability and reciprocity

1. Employment

This term refers to the number of individuals in the workforce at any point in time. Estimates of employment provide a basis for evaluating the adequacy of current opportunities for earning retirement benefits. Age-specific estimates provide an indication of when elderly workers retire from the workforce and can provide a basis for evaluating trends.
in the dependency ratio—the proportion of the population dependent upon the workforce.

The federal government estimates employment in two ways. First, the Bureau of Labor Statistics (BLS) estimates employment using the payroll concept, based upon a monthly survey of the jobs in 165,000 business establishments. This approach emphasizes the number of jobs rather than workers and is useful for evaluating the characteristics of job opportunities. In contrast, the Bureau of the Census estimates employment using the household concept which is based upon monthly interviews with a sample of households. This approach emphasizes the number of job holders at any point in time, and is useful for evaluating the characteristics of workers.

Both estimates provide useful information about employment patterns if they are used with care and provide a useful basis for evaluating the likelihood of workforce attachment for major groups of the population and for estimating the size of the population dependent upon these workers. However, a major definitional issue concerns whether to evaluate those opportunities for earning retirement benefits in terms of the number of individuals or households with an attachment to the labor force.

As shown in Table I-3, the Bureau of Census reported approximately 107 million workers in 1978 under the household concept of employment. The table shows some of the characteristics of these workers as well as of those not in the workforce.
### TABLE I-3
EMPLOYMENT STATUS OF THE ADULT POPULATION, 1978

<table>
<thead>
<tr>
<th>Employment Status</th>
<th>Number of Persons by Age (in millions)</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>16-24</td>
<td>25-64</td>
</tr>
<tr>
<td>Employed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Civilian Workforce</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-- full-year (27-52 weeks)</td>
<td>16.4</td>
<td>66.9</td>
</tr>
<tr>
<td>-- part year (1-26 weeks)</td>
<td>10.5</td>
<td>9.2</td>
</tr>
<tr>
<td>Military</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>Subtotal</td>
<td>27.0</td>
<td>76.2</td>
</tr>
<tr>
<td>Unemployed/</td>
<td>0.5</td>
<td>0.8</td>
</tr>
<tr>
<td>Not in the Work Force</td>
<td></td>
<td></td>
</tr>
<tr>
<td>School</td>
<td>5.8</td>
<td>0.5</td>
</tr>
<tr>
<td>Home Care</td>
<td>2.0</td>
<td>16.2</td>
</tr>
<tr>
<td>Illness/Disability</td>
<td>0.2</td>
<td>4.3</td>
</tr>
<tr>
<td>Retirement</td>
<td>--</td>
<td>1.4</td>
</tr>
<tr>
<td>Other</td>
<td>0.3</td>
<td>0.5</td>
</tr>
<tr>
<td>Subtotal</td>
<td>8.3</td>
<td>22.9</td>
</tr>
<tr>
<td>Total</td>
<td>35.8</td>
<td>99.9</td>
</tr>
<tr>
<td>Percent of Total</td>
<td>22.7%</td>
<td>63.1%</td>
</tr>
</tbody>
</table>

**Note**: Refers to individuals unemployed for the entire year.


---

2. **Coverage**

This term generally refers to the number of individuals who work in employment covered by a retirement plan and have an opportunity to become a participant and earn retirement benefits. However, estimates of the number of covered workers and individuals will vary with the definition of coverage used.

The Bureau of Labor Statistics (BLS) estimates the number of covered workers in private retirement programs by counting all employees at
establishments that sponsor a retirement plan because such workers are potentially eligible to participate in a plan.

Other sources such as the Social Security Administration (SSA) estimate private retirement plan coverage as the number of individuals who have satisfied the formal participation requirements of a plan. Although this estimate provides a useful basis for evaluating the stringency of participation rules as well as the prevalence of retirement programs, it tends to understate the number of workers with an opportunity to become participants. As a result, estimates of coverage will vary with the definition used.

In order to evaluate the adequacy of existing retirement program coverage, decision-makers will have to select both a definition of coverage and an appropriate standard of adequacy. For example, SSA estimates the number of private sector workers eligible for plan membership as a proportion of all workers over age 16. In 1975, SSA estimated that under their definition of coverage 48 percent of all private workers were covered by plans. However, because ERISA does not generally require private programs to cover workers under age 25, such a standard may be unrealistic.

Alternatively, one might evaluate the number of workers over age 25 and eligible for plan membership as a proportion of all workers over age 25 or one might estimate coverage among full-time workers only. These measures recognize that all workers over age 16 do not have to be covered in order to ensure that all workers or households at some time during their careers have an opportunity to earn a retirement benefit.

To illustrate the potential variation in coverage, Table I-4 shows the estimated range of coverage rates for different age and job categories using the BLS and SSA definitions of coverage.
### TABLE I-4

**RANGE OF POTENTIAL VARIATION IN PRIVATE RETIREMENT PLAN COVERAGE BY AGE AND JOB STATUS, 1974**

<table>
<thead>
<tr>
<th>Job Status</th>
<th>Percent of Private Workers Covered</th>
<th>BLS</th>
<th>SSA</th>
<th>BLS</th>
<th>SSA</th>
<th>BLS</th>
<th>SSA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 16-24</td>
<td>Age 25-64</td>
<td>Age 16-64</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-Time</td>
<td>58%-75%</td>
<td>28%-43%</td>
<td>69%-75%</td>
<td>62%-67%</td>
<td>70%-72%</td>
<td>58%-60%</td>
<td></td>
</tr>
<tr>
<td>(More than 1,000 hours)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part-Time</td>
<td>40%-50%</td>
<td>16%-23%</td>
<td>47%-51%</td>
<td>23%-25%</td>
<td>45%-48%</td>
<td>20%-24%</td>
<td></td>
</tr>
<tr>
<td>(Less than 1,000 hours)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>49%-64%</td>
<td>22%-32%</td>
<td>64%-69%</td>
<td>53%-57%</td>
<td>64%</td>
<td>48%</td>
<td></td>
</tr>
</tbody>
</table>

**SOURCE:** ICF estimates of the distribution of coverage under BLS definition (workers in establishments sponsoring a plan) and SSA definition (workers eligible for membership in a plan) derived from analysis of age/service distribution for participants in a typical plan in combination with coverage, age, job status, and participation information by industry available from the Bureau of Labor Statistics.

The table emphasizes two basic points:

- Evaluating the scope of coverage as a proportion of all workers will tend to overstate the potential need for broader coverage requirements; for example, even though SSA estimates that 48 percent of all workers were covered, this could represent up to 67 percent of all full time workers age 25-64; and

- The use of both the SSA and BLS definitions of coverage are required to provide a basis for determining the appropriate emphasis on new plan formation or broader participation standards.

Thus, an unambiguous assessment of the scope of retirement plan coverage requires substantial care in defining coverage. In addition, a distinction must be made between the probability that an individual will
be covered by a plan and the probability that an individual will ever earn a benefit under a plan.

3. Participation

This term generally refers to the number of workers who have qualified for membership in a retirement plan, but a number of factors can affect the reliability of estimates of total participation.

Estimates of participation generally include workers in three different groups: active participants (those currently earning or accruing a benefit); separated vested participants (those who have earned a benefit but no longer work for the plan sponsor); and retired participants (those who have earned and are currently receiving a benefit). To become an active participant, a covered worker must usually meet minimum age and service standards, determined by the ERISA requirements of age 25 with one year of service for private plans.

Estimates of total participation can be misleading because some workers may participate in more than one program. For example, most private and many public sector workers participating in employer-sponsored plans also participate in the Social Security system. Some workers may participate in both a primary plan and a supplementary plan under one sponsor. Still others may have a vested benefit from previous employment while participating in their current employer's plan. Thus, decision-makers will have to differentiate between total plan memberships reflecting the multiple memberships identified above, and total participants reflecting the number of workers with one or more plan memberships.

Furthermore, in evaluating the adequacy of current participation standards, decision-makers must recognize the potential upper limits on
total participation due to inherent characteristics of the workforce. Because a significant portion of the workforce will always be under age 25 or have less than one year of service, one would generally not expect to find 100 percent of employees working for employers who sponsor plans to be participating in those plans at any point in time. Table I-5 shows the characteristics of the workforce by age and annual hours of service based upon Bureau of Census estimates.

Table I-5

CHARACTERISTICS OF WORKERS BY AGE AND ANNUAL HOURS OF SERVICE, 1978

<table>
<thead>
<tr>
<th>Annual Hours Worked</th>
<th>Percent of Total Workforce by Age (in percent)</th>
<th>16-24</th>
<th>25-64</th>
<th>65+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1,000 hours</td>
<td></td>
<td>14.2%</td>
<td>17.2%</td>
<td>2.4%</td>
<td>33.8%</td>
</tr>
<tr>
<td>1,000 or more hours</td>
<td></td>
<td>10.9%</td>
<td>54.0%</td>
<td>1.3%</td>
<td>66.2%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>25.1%</td>
<td>71.2%</td>
<td>3.7%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>


Even if retirement programs covered all workers, one would only expect to find approximately 55 percent of the workforce actually accruing service credits in these plans, assuming the plans had service rules corresponding with ERISA's minimum standards. As a practical matter, many plans have broader standards. However, inherent upper limits to participation may still exist.

1/ Employees participating in private plans generally must work at least 1,000 hours during a year to gain a year of service for vesting or benefit accrual purposes. Those who do not work 1,000 hours but work at least 500 hours remain plan participants but do not gain new vesting and benefit accrual credits for that year.
4. Vested participation

Estimates of vested participants reflect the number of participants who have completed a minimum period of service which ensures their nonforfeitable right to a retirement benefit. Vested participants receive a benefit even if they terminate their employment. Nonvested participants receive no benefit if they terminate. While private plans are subject to minimum vesting standards under ERISA, most employer-sponsored plans employ vesting provisions primarily as a way to reward longer periods of service and improve firm productivity.

Nevertheless, for any set of minimum vesting standards there may exist inherent upper limits on the proportion of all workers or participants who can become vested. To illustrate this point, Table I-6 shows the characteristics of the current workforce by age and service on current job. Because most employer-sponsored plans provide some vesting after 5 or 10 years, the estimates indicate that no more than 40 percent

<table>
<thead>
<tr>
<th>Service on Current Job</th>
<th>Percent of Total Workforce by Age (in percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>16-24</td>
</tr>
<tr>
<td>0-5 years</td>
<td>20.9%</td>
</tr>
<tr>
<td>5-10 years</td>
<td>.9</td>
</tr>
<tr>
<td>10 or more years</td>
<td>--</td>
</tr>
<tr>
<td>Total</td>
<td>21.8%</td>
</tr>
</tbody>
</table>

of those in the workforce would be eligible for vested benefits at any point in time if they all participated in a plan. The table also illustrates that at any point in time, approximately 21 percent of those in the workforce would not be vested, primarily because they were too young to have accumulated enough service. However, many of these workers can expect to accumulate the required service in the future. As a result, decision-makers will have to assess the adequacy of current vested participation using standards which reflect the inherent upper limits imposed by the characteristics of the workforce.

5. Portability and reciprocity

Portability arrangements permit an individual to move the assets or credits for service from one retirement plan to a different plan sponsored by another employer or the same employer. The methods of providing portability vary widely depending on the characteristics of the individual plan. However, one example is an arrangement that would permit an employee to move the value of vested benefits when transferring jobs. However, portability does not necessarily ensure that the individual will be permitted to deposit the transferred assets or credits in the plan of the succeeding employer. If one employer is willing to transfer a terminating worker's pension benefits, but the second employer will not accept them as credits to the worker's account, then the worker may establish an Individual Retirement Account (IRA) or purchase terminal funding annuities to secure his benefits.

Reciprocity refers to portability arrangements that involve a mutual agreement among two or more plan sponsors to accept assets or service credits for a transferring worker. Multiemployer plans are commonly cited as examples of reciprocal agreements. Under such plans, several employers sponsor a single plan, typically under a reciprocal agreement which ensures that service for any participating employer will contribute toward vesting and benefits in the plan. Reciprocal arrangements are not
limited to multiemployer plans, however. For example, while maintaining
separate plans for each of its regional subsidiaries, American Telephone
and Telegraph (ATT) has an agreement with the Communications Workers of
America (CWA) to provide employees covered by one plan with credit toward
retirement benefits for any service completed while they were covered by
a plan of its subsidiaries. This arrangement differs from reciprocity
under a multiemployer plan because it permits transfers of credits among
different plans rather than among different employers contributing to the
same plan. Reciprocal agreements are also found among unrelated single
employer plans and exist among defined contribution plans as well as
defined benefit plans.

Thus, the term portability encompasses a wide variety of arrangements
designed to provide an individual the ability to move assets or credits
upon job transfer. Reciprocity, however, refers only to those types of
portability arrangements which involve a mutual agreement among plan
sponsors to accept transferred assets and credits.

D. TERMS AFFECTING WHO PAYS FOR RETIREMENT BENEFITS

Wage earners, employers and taxpayers bear the ultimate cost of all
retirement programs but determinations as to the distribution of these
costs requires substantial precision in defining the terms associated
with program costs and benefits.

Depending upon the financing methods used, different age and income
groups may assume different shares of this cost. Thus, a major policy
issue concerns whether the costs of these programs are shared in an
equitable manner. Because of the wide range of retirement programs and
financing methods, it is frequently difficult to estimate the overall
retirement program costs associated with each segment of the population.
This section reviews a number of definitional issues that affect the consideration of alternative financing and funding methods.

- financing methods
- dependency ratio
- funding methods
- actuarial liability
- unfunded liability

1. Financing methods

This term refers to the range of methods available for collecting funds to pay retirement benefits. The method chosen affects the share of costs assumed by individuals in different age and income groups but does not necessarily affect the total cost of retirement benefits. As alternative approaches are considered, the specific impact on each group will have to be defined.

Some programs rely upon general tax revenues derived from federal, state, and local income taxes and from various sales or excise taxes. Other retirement programs rely upon payroll taxes, employer contributions or employee contributions as the primary means of financing retirement benefits.

Characteristics of the major financing methods used for current retirement income programs include the following:

- the federal income tax is broad based and progressive. Programs financed through this tax will tend to distribute the annual costs of retirement programs across all wage earners (regardless of whether they are current or potential beneficiaries) in a way which requires a progressively higher contribution as a percentage of income from relatively more affluent individuals. However, because the income tax covers such a large number of individuals, even minor changes in the tax rules have a substantial impact on total tax revenues and the share assumed by different income groups.
the Social Security payroll tax collects a fixed percentage of covered wages and salary up to a specified maximum level of earnings on each worker and his employer. The exclusion of unearned income and earnings above the taxable maximum tends to make this tax more regressive than the income tax. However, evaluating the tax in relation to ultimate benefits may offset this effect because, while lower income workers pay a higher proportion of wages in payroll taxes, they also receive a higher proportion of pre-retirement income as benefits. (Moreover, the employee may share the burden of the employer's portion of payroll taxes in the form of lower wages or higher costs.)

employer contributions may take a number of forms including a percentage of payroll, a percentage of profits, or a specified dollar amount per hour. Regardless of form, views differ on whether employer pension contributions represent a cost to the employer (as profits foregone), to the employee (as wages foregone) or to the consumer (as prices). Although it is possible to test the distributional impact under each case, the appropriate perspective may be largely a matter of viewpoint rather than fact. As a result, decision makers will have to specify the assumptions used in evaluating whether the costs of employer-sponsored plans are distributed in an equitable manner.

2. Dependency Ratio

The aged dependency ratio commonly reflects the ratio of retirees (those over age 65) to potential workers (those between age 20 and 64). Different assumptions, especially the assumed age of retirement, substantially affect the ratio. Table I-7 illustrates this point. It shows the estimated change in the aged dependency ratio over the 1950 to 2050 period assuming retirement at age 65 which suggests that we can expect a substantial increase in the ratio, especially after the turn of the century. However, by evaluating the retirement age that produces a constant aged dependency ratio, decision makers can determine the potential significance of longer term demographic changes on retirement programs. For example, the table shows that the 1980 aged dependency ratio can be maintained over the period if retirees decide to defer retirement for 4 to 5 years. Thus, the dependency ratio can provide a
TABLE I-7
AGED DEPENDENCY RATIO, 1950-2050

<table>
<thead>
<tr>
<th>Year</th>
<th>Aged Dependency Ratio with Retirement At Age 65</th>
<th>Retirement Age to Maintain Dependency Ratio Existing in</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(persons over age 65/persos age 20-64)</td>
<td>1950 1960 1970 1980</td>
</tr>
<tr>
<td>1950</td>
<td>14.1</td>
<td>65   --  --  --</td>
</tr>
<tr>
<td>1960</td>
<td>17.4</td>
<td>--   65  --  --</td>
</tr>
<tr>
<td>1970</td>
<td>18.4</td>
<td>--   --  65  --</td>
</tr>
<tr>
<td>1980</td>
<td>19.6</td>
<td>67   65  65  65</td>
</tr>
<tr>
<td>1990</td>
<td>21.0</td>
<td>69   66  66  65</td>
</tr>
<tr>
<td>2000</td>
<td>20.9</td>
<td>69   66  66  65</td>
</tr>
<tr>
<td>2010</td>
<td>21.1</td>
<td>68   66  65  65</td>
</tr>
<tr>
<td>2020</td>
<td>27.1</td>
<td>70   68  68  67</td>
</tr>
<tr>
<td>2030</td>
<td>33.3</td>
<td>72   71  70  70</td>
</tr>
<tr>
<td>2040</td>
<td>31.9</td>
<td>74   72  71  70</td>
</tr>
<tr>
<td>2050</td>
<td>31.5</td>
<td>73   71  70  69</td>
</tr>
</tbody>
</table>


useful measure of the impact of changes in eligibility rules, retirement ages, benefit levels and tax rates.

3. Funding method

This term refers to the manner in which retirement programs distribute costs over time and thereby affect the level of potential risk of benefit loss.

In general, a program's funding objectives should seek to limit the risk that a sponsor will be unable to make benefit payments. At one extreme, pay-as-you-go systems recognize expenses as benefits are paid and collect just enough funds to meet annual expenses. Program sponsors using this arrangement typically have an assured source of funds. At the
other extreme, fully-funded retirement programs recognize all expenses for benefits at the time benefits are earned by participants. Under such an arrangement, annual contributions are intended to provide enough assets to pay all accrued benefits in the event of plan termination.

In practice, few programs lie at either extreme. Considerable variation in funding practices exists among all types of retirement programs:

- **Social Security** is considered to be a pay-as-you-go system even though it maintains a contingency reserve to absorb potential fluctuations in cash flow. The practice of not funding benefits in advance of payment is frequently justified by the argument that the risk of benefit loss is low because Social Security is supported by a source of tax revenues that is presumably stable.

- state and local employee plans typically fund a portion of accrued benefits in advance of payment because the sources of tax revenue available to sponsors are less stable than those available to the federal government. However, the wide variation in state and local governments' ability to increase tax revenues has raised questions about the soundness of many plans. For example, the House Pension Task Force found that approximately three-fourths of these plans were funded on a less rigorous basis than the standards applied to private programs.

- private employee plans are required by law to fund some portion of accrued benefits in advance of their payment in order to reduce the risk of benefit loss to participants. However, because firms are viewed as going concerns, and are not expected to go out of business at the end of the accounting period, private plans are not required to be fully-funded and few plans are. Also, private plan participants are somewhat insulated from any residual risk because PBGC largely insures against loss of vested benefits in the event of plan termination.

Unlike other retirement programs, private defined benefit plans must meet minimum funding standards established by law. ERISA requires the sponsors of these plans to contribute a minimum amount that approximates the present value of the costs of benefits earned during the year plus an
amount that amortizes the unfunded portion of previously earned benefits. However, these amounts can vary under different actuarial cost methods, which are discussed in the next section. Nevertheless, the primary purpose of a funding method is to distribute retirement benefit costs over time in a manner which limits the potential risk of benefit loss to reasonable levels.

4. Actuarial liability

This term, as well as the term accrued liability, is used with defined benefit plans when referring to the excess of the present value of future benefit payments over the present value of future normal cost contributions. Under actuarial methods that distinguish costs associated with future service from costs associated with past service, the actuarial liability refers to the accumulated value of estimated costs incurred to date for benefits to be paid by the plan. In all cases it reflects an actuary's estimate of expected costs, not a legal liability of a program.

However, not all actuarial methods formally distinguish between future and past service costs. Among cost methods that make this distinction, certain differences exist in the manner in which costs are distributed over time. Due to the availability of different actuarial cost methods as well as the suitability of different actuarial assumptions under a given set of facts, actuarial liabilities for an individual can vary substantially.

Figure I-1 below shows how each of three commonly used actuarial cost methods defines actuarial liabilities and demonstrates how a plan's actuarial liability could vary, depending on the cost method used. Each method produces different actuarial liabilities because each distributes the costs of funding future benefit payments in different ways. In fact, because the aggregate cost method does not formally distinguish future
**Figure I-1**

**ACTUARIAL LIABILITIES AS A PORTION OF FUTURE BENEFIT COSTS UNDER ALTERNATIVE COST METHODS**

![Diagram showing actuarial liabilities under different cost methods](image)

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Because the aggregate cost method does not formally distinguish future and past service costs, the actuarial liability does not reflect the value of costs accumulated to date as it does under the other methods. Rather, actuarial liabilities are defined to be equal to current assets.

**SOURCE:** Comparison derived from illustrations in "Pension Costs and Unfunded Liabilities - A Qualitative Profile", a Special Report prepared by Kwasha Lipton, 1979.

Thus, generally speaking, if the three cost methods were applied to the same plan at the same point in time, the aggregate cost method would produce a lower actuarial liability than would the unit credit method, and the entry age normal method would produce a higher estimate than would the unit credit method. Although each of these accepted methods provides different actuarial liabilities, the total costs of paying...
retirement benefits under each approach are equal. They simply allocate these costs differently over time. Thus, in evaluating actuarial liabilities, one must consider the impact of alternative cost methods in these comparisons.

Estimates of actuarial liabilities can also vary due to other factors. Using the same cost method, different actuaries might reasonably choose different sets of assumptions to value the plan. The major assumptions required to value a plan include future interest rates, investment returns, salary increases, retirement patterns and withdrawal rates. As a result, the comparison of actuarial liabilities among plans requires a careful review of the underlying assumptions as well as cost methods.

5. **Unfunded liability**

This term reflects the difference between actuarial liability and current assets and often has been used as a measure of the soundness of individual defined benefit programs, presumably reflecting the value of participants' benefits lost in the event of plan termination. However, for a variety of reasons, evaluating plan soundness using comparisons of unfunded liabilities can produce misleading results.

First, as has been demonstrated, estimates of unfunded liabilities can vary with the actuarial cost method and the valuation assumptions used. At one extreme, the aggregate cost method is defined to produce no unfunded liability, even though the annual costs under this method are frequently higher. At the other extreme, the entry age normal method tends to produce a higher unfunded liability but, because a portion of accrued liability includes the value of unvested benefits, the unfunded liability tends to overstate the risk upon termination.
A second factor affecting the use of this term concerns variations in estimates of program assets. A program's assets can be valued either on the basis of book value, commonly representing the purchase price of the assets, or market value, representing the price that others would pay for the asset now. However, because many assets are not purchased and maintained for their liquidation value, but rather for their potential for long-run appreciation, it is not clear which measure of asset value to apply when using unfunded liabilities as a measure of benefit security. Furthermore, differences in the relative quality of the underlying assets, regardless of how they are valued, cannot be captured adequately using unfunded liabilities.

Finally, estimates of unfunded liabilities can vary substantially even with the use of common cost methods, assumptions and asset values. For example, the period since the establishment of the plan or the last benefit change can have a significant impact on unfunded liabilities. New plans that provide credit for prior service will have a higher unfunded liability than the same plan ten years later. In addition, the level of unfunded liabilities should be viewed in relation to the sponsors' financial condition and prospects, as well as broader economic conditions. As a result, the use of the term unfunded liabilities when measuring a plan's financial soundness requires a careful review of a broad range of factors.
CHAPTER II
PUTTING ISSUES INTO PERSPECTIVE

A. AN APPROACH TO INTEGRATED CONSIDERATION

Evaluation of the full range of retirement income policy issues in an integrated fashion is as important as definitional precision in developing more effective policies, especially in light of the pluralistic nature of retirement income programs. Individuals receive retirement income benefits from a variety of publicly and privately administered programs which differ widely in the level, types and financing of benefits offered, the criteria for eligibility and the manner in which benefits are earned. Individuals also may supplement their income through personal savings. In recent years, a number of policy issues have arisen, reflecting potential problems with the adequacy of retirement benefits, the opportunity to participate in retirement income programs and the funding of these programs. As retirement programs continue to grow, the importance of resolving these issues in a careful manner also increases.

This chapter reviews a number of specific policy issues and presents an approach for organizing them into a broader framework. In addition, this chapter identifies a series of practical questions that policy makers should raise about each policy issue. These questions are intended to assist careful decision-making by helping to establish priorities among individual issues, elicit the facts required to resolve issues, and identify potential implementation problems associated with otherwise viable alternatives.
B. ARTICULATING A POLICY FRAMEWORK

An approach for organizing specific issues into a broader policy framework suggested in this report is to group issues into one of three fundamental policy questions. Briefly, these questions are:

- **Goals:** What retirement income levels should be established for individuals during retirement? This broad question encompasses the two major policy issues of how to determine the adequacy of retirement income benefits and how to define retirement for purposes of establishing eligibility for retirement benefits. If these two issues can be resolved, then policy makers will have established the primary goals of a comprehensive retirement income policy.

- **Strategy:** What mix of private and public programs should be used to achieve these income levels? This question requires an assessment of the adequacy of existing opportunities for individuals to receive a retirement benefit. Where gaps exist, policy makers will have to address the policy issues of whether new alternatives should emphasize mandatory or voluntary participation, and whether participants should earn benefits or receive them as a societal right. Where unintended overlaps in programs occur, policy makers will have to determine how to coordinate them. Resolving these issues establishes the basic strategy for achieving the objectives of a comprehensive retirement income policy.

- **Financing:** Who should pay for these retirement income programs? This broad question raises the related policy questions of whether each generation should pay for its own retirement benefits, how different age and income groups should share the costs of these programs and who should bear the risk of funding inadequacies. Addressing these issues will establish whether existing and proposed retirement income policies are affordable and identify how these policies affect the economy.

Although other approaches could be used, this framework encompasses the full range of relevant issues and anticipates the full range of policy alternatives for addressing these issues.
This policy framework has a number of important advantages. First, it can assist decision makers in associating specific proposals with the correct policy issues. For example, some observers have suggested that extending participation in existing plans to younger workers would address the problem of inadequate retirement benefits. However, if younger workers already have a high probability of participation in the future under some plan, extending coverage to this group now would have little impact on most workers' benefit levels. Rather, this proposal really addresses the issue of whether younger workers should be covered in order to have a better opportunity to earn a retirement benefit during their career. Thus, the policy framework suggested above can assist decision makers by clarifying which issues specific proposals address.

This approach has a second advantage in that it prevents defining a particular problem in terms of a possible solution. For example, defining a problem as the inability of retirement benefits to change with the CPI can suggest the conclusion that indexing benefits to the CPI represents the best policy. However, defining the problem in this way may effectively preclude an analysis of actual cost-of-living patterns for retirees in different age groups and thus the suitability of other benefit adjustment methods. It also may preclude an analysis of broader alternatives to indexing and to the control of inflation. By organizing the issues into specific elements without regard to a potential solution, the policy framework may contribute to more effective decision-making.

Finally, this framework has the advantage of encouraging a review of the issues that does not limit the range of possible solutions to changes in existing retirement income programs. None of the policy issues can be resolved in the abstract. They must be viewed in the context of existing retirement income goals and in relation to the current mix of retirement income programs and funding mechanisms. However, by organizing the issues in a neutral manner, this framework encourages distinctly new solutions as well as improvements in existing programs.
C. ISSUES AFFECTING RETIREMENT INCOME LEVELS

The need for more explicit public policy objectives for retirement income to overcome the potential for significant gaps and overlaps among programs is emphasized by the anticipated increases in the number of people relying on retirement programs and in the costs of the programs. These goals can serve as an important frame of reference for each retirement program in our pluralistic system.

Establishing explicit retirement income objectives raises several problems for decision-makers. First, substantial gaps exist in our knowledge of how the actual costs of living change during retirement. Similarly, available research does not provide a good explanation of how programs adjust pension benefits over time and how individuals use personal savings and part-time employment to meet their needs. As a result, establishing explicit and affordable income objectives may have to await the results of further research.

A second problem concerns our technical capacity to predict the factors that affect the system's ability to achieve explicit income objectives in the future. A sound retirement income policy requires that the proposed income objectives be achievable. To the extent that future demographic and economic patterns cannot be predicted, decision-makers may have to establish more modest income objectives to assure confidence in the policy. Alternatively, decision-makers may prefer to emphasize explicit income objectives for selected segments of the population, relying on personal preferences for work and retirement to maintain the balance required in an affordable system.

Policy-makers will have to address two related policy issues in establishing explicit retirement income objectives:
1. How should we determine the adequacy of income required during retirement? Adequacy can reflect some absolute standard of living that represents the minimum level of income necessary for subsistence. The Bureau of Labor Statistics' (BLS) annual budgets for elderly couples reflect one view of this standard. However, such levels should vary by location and health status. Alternatively, one can examine retirement income adequacy by analyzing how disposable income during retirement compares with disposable income prior to retirement. For example, Table II-1 shows how income replacement rates vary by income level for single workers with Social Security and a private pension. This table also indicates how replacement rates can change with inflation during retirement and suggests the importance of assessing adequacy at different income levels and at different points in time.

Table II-1

TYPICAL PATTERNS OF RETIREMENT INCOME
BY INCOME LEVEL
(includes Social Security and pension benefit)

<table>
<thead>
<tr>
<th>Final Year's Pay</th>
<th>After Tax Benefits (At Age 65)</th>
<th>Inflation Adjusted Replacement Rate at Age:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-Tax</td>
<td>After-Tax</td>
</tr>
<tr>
<td>$ 7,500</td>
<td>$ 6,640</td>
<td>$ 5,200</td>
</tr>
<tr>
<td>15,000</td>
<td>11,930</td>
<td>9,500</td>
</tr>
<tr>
<td>30,000</td>
<td>21,900</td>
<td>15,100</td>
</tr>
<tr>
<td>50,000</td>
<td>33,440</td>
<td>21,950</td>
</tr>
</tbody>
</table>

SOURCE: Business Roundtable Study of Retirement Benefit Levels, Costs and Issues, prepared by TPF&C, August, 1978; estimates for single workers retiring in 1979 at age 65 with 30 years of service under a pension plan with a benefit of 1.67% x high 5 year average pay x years of service, less 1.67% x applicable OASI benefit x years of service; assumes value of private benefit declines with an inflation rate of 4 percent.

A related policy issue concerns what income, assets and in-kind benefits to include in the evaluation of adequacy. As indicated in Chapter I, the replacement rate differs significantly when income from one program or all programs is included. Moreover, the replacement rate is sensitive to
alternative definitions of pre-retirement income; final wages and salary, average wages and salary, or total income from all sources. In addition, it is sensitive to whether pre-tax wages and salary or after-tax disposable income is used to assess adequacy.

2. How should we define retirement for purposes of establishing eligibility for retirement income benefits? Current programs commonly define retirement eligibility in terms related to age and length of service in the workforce. A major issue concerns whether to: a) encourage or require a range of eligibility ages, in an effort to accommodate individual worker preferences, or, b) establish a uniform age for all programs, in an effort to reduce the potential uncertainty about program costs. A range of ages with benefits based upon length of service can provide a self-adjusting system where individual decisions about workforce participation keep benefits and costs in balance. In contrast, a uniform retirement eligibility age may reduce the uncertainty about benefits and costs, but may not satisfy individual worker preferences. A related issue concerns whether other retirement eligibility factors should uniformly apply, such as poor health, disability or unemployment. Because these circumstances are frequently beyond one's control, they may represent legitimate grounds for retirement after some minimum age. However, because objective standards of disability or cause of unemployment do not exist, these factors may permit some abuse.

Addressing these policy issues will permit policy makers to establish the basic objectives of retirement income programs. These objectives should specify the levels of income that would adequately meet the needs of retirees at different ages and the range of conditions under which individuals become eligible for these benefits.

It should be noted that the level of retirement income historically has been determined by a combination of explicit and implicit decisions by workers, employers and government. To the extent that future demographic and economic uncertainties create risks in achieving these objectives, policy makers may prefer a system that emphasizes individual worker decisions to maintain a balanced system rather than one which
emphasizes broad agreement on uniform benefits and retirement eligibility ages.

D. ISSUES AFFECTING THE MIX OF RETIREMENT PROGRAMS

A second set of issues deals with selecting the most appropriate vehicles for achieving specified retirement income goals. Separation of the issues of program mix from the issues of benefit levels can aid in our understanding of the strengths and weaknesses of individual programs in improving individuals' opportunities for receiving retirement benefits.

Retirement income programs in this country have traditionally emphasized active participation in the workforce as a condition for receiving benefits. However, some retirees may receive inadequate retirement incomes due to the lack of opportunities to participate in a retirement program, rather than due to inadequate benefits per se.

This can occur because not all employers sponsor retirement plans or participate under Social Security. In addition, some workers may not expect to accumulate the minimum periods of service required to qualify for a vested benefit due either to personal preferences about labor force participation or external events such as death, disability or layoffs. As a result, policy makers will have to assess the degree to which inadequate retirement incomes are due to the lack of opportunities to participate in a retirement program, as distinct from inadequate benefit formulas.

For individuals whose opportunities to participate in retirement programs are adequate, existing programs place different emphasis upon the degree to which benefits are intended to reflect a transfer of income from higher income to lower income groups, or a form of deferred compensation to reward prior service in the workforce. Although the relative emphasis is partially affected by the specific benefit formulas
under each program, the mix is also influenced by government regulation of the different retirement programs. For example, the Internal Revenue Code prescribes the basis for taxing contributions and benefits under each program as well as the basis for coordinating benefits under Social Security and employer-sponsored plans. ERISA prescribes minimum standards for participation, vesting and funding under private plans. The Social Security Act prescribes the conditions under which selected groups of workers can withdraw from the program. As a result, decision makers can affect the appropriate mix of retirement programs by the standards they set for the operation of these programs.

Policy makers will also have to address how retirement income programs affect labor force activity. Available research has not established whether changes in participation and vesting provisions affect worker turnover under existing plans, and, if so, whether this favorably affects productivity. In addition, if requiring employers to sponsor pension plans raises labor costs significantly, it will be important to understand the potential impact of these costs on the number and kinds of jobs in the workforce.

In answering the question of the appropriate mix of retirement income programs, decision makers will have to address three related policy issues:

1. How should we determine the adequacy of existing opportunities for individuals to receive a retirement income benefit? A major issue concerns the degree to which retirement benefits are inadequate primarily because of a lack of opportunities for individuals to participate in retirement programs. In addressing this issue, policy makers will have to determine:

   • whether existing public and private programs provide an adequate period of time for workers to earn a benefit at some point during their careers;
• whether workers in firms without programs prefer the opportunity to participate in a program over other benefits; and

• whether individuals with no significant labor force participation can participate in other programs providing income during retirement.

In the past, some have evaluated the adequacy of current opportunities for retirement program coverage by estimating the number of covered participants as a percentage of all workers. However, as shown in Chapter I, this may significantly understate the proportion of individuals that can expect to receive a retirement benefit. For example, many younger workers, especially those under age 25, can expect to participate at later ages despite their exclusion now. Many spouses currently working part-time can expect to receive retirement benefits as a result of a primary wage earner's participation. As a result, this issue turns not on estimates of the proportion of all workers currently covered, but on estimates of the proportion of all individuals living until retirement who are expected to receive some benefit.

2. How should we change the opportunities for individuals to receive a retirement income benefit? Decision makers will have to assess the suitability of individual proposals for addressing the needs of workers whose employers currently have a plan, workers whose employers do not have a plan and individuals with little labor force attachment. To illustrate:

• proposals to change minimum plan standards for participation, vesting and portability may alter workers' opportunities to receive benefits under existing plans;

• proposals to encourage individual account plans or simplified pension plans may improve uncovered workers' opportunities to receive a benefit other than Social Security;

• proposals to require employers to maintain retirement income programs for their employees may improve opportunities for low income and mobile workers to receive a benefit; and
proposals to expand publicly sponsored plans like Supplemental Security Income (SSI) or to expand joint and survivor benefits will affect benefit opportunities for those without substantial attachment to the workforce.

By examining the probabilities of benefit receipt as well as benefit levels, for specific cohorts of workers in each category above, decision makers can assess how individual benefit opportunities change under each proposal.

3. How should we coordinate individual participation in multiple retirement programs? Where individuals participate in more than one retirement program, decision-makers will have to assess the relative contribution of each program to overall benefits and the degree to which these benefits balance the need for transferring income and paying a deferred wage. In addition, they will have to consider whether to adjust for unintended overlaps through the mix of benefit payments or through the manner in which these benefits are earned. Specific areas of potential overlap include:

- employer-sponsored plans and Social Security, where eligibility can be affected through minimum participation standards under ERISA and the Social Security Act and benefits can be affected through integration formulas established by the IRS;
- Social Security and SSI, where individuals with short work histories receive retirement benefits with higher replacement rates; and
- alternative tax treatment under different programs, where employee contributions are treated differently than employer contributions, and Social Security benefits are treated differently than benefits under employer-sponsored plans.

E. ISSUES AFFECTING WHO PAYS FOR RETIREMENT BENEFITS

The various methods of financing and funding retirement benefits used have different impacts on different age and income groups in terms of allocating costs and risk of benefit loss. These effects should be
identified and considered in an integrated manner before determining the most appropriate approaches to financing and funding questions.

The different methods of allocating the costs of these programs among different age and income groups are illustrated in the discussion of financing methods in Chapter I. This diversity dictates the need for precision in assessing the allocation of the costs of all programs combined among different income and age groups. This distribution of costs can also be expected to affect the performance of the economy.

An overriding issue concerns whether we can afford in the longer term the benefits promised under current programs. For instance, the expected rapid increase in Social Security costs during the first half of the next century raises the concern that future generations may simply refuse to pay the benefits promised by current law. As shown in Table II-2, the Board of Trustees of the OASDI Trust Funds estimates that the payroll tax rates required to pay currently promised benefits will increase from

Table II-2

<table>
<thead>
<tr>
<th>Calendar Year</th>
<th>Percent of Taxable Payroll</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>10.56%</td>
</tr>
<tr>
<td>1990</td>
<td>10.70%</td>
</tr>
<tr>
<td>2000</td>
<td>10.65%</td>
</tr>
<tr>
<td>2010</td>
<td>11.58%</td>
</tr>
<tr>
<td>2020</td>
<td>14.29%</td>
</tr>
<tr>
<td>2030</td>
<td>16.44%</td>
</tr>
</tbody>
</table>

SOURCE: 1979 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds, Table 27, p. 75; estimates based on assumptions of projection series Alternative II.
11.58 percent in 2010 to 16.44 percent in 2030, following a relatively stable period between 1980 and 2010. Even the relatively low Social Security deficits expected during the next five years raise the question of whether we have the technical capacity to establish with confidence a firm set of soundly financed benefits. More importantly, these questions suggest that all retirement income programs possess some degree of risk. As illustrated in the Chapter I discussion of funding methods, the different funding methods used by the different retirement programs place the risk on different groups. The major policy issues concern who will bear the risks of inadequate funding.

Specific policy issues facing decision makers include:

1. **Should each generation of workers finance the costs of its own retirement income?** This question addresses whether future generations will pay for the benefits that previous generations have promised themselves. To the extent that future generations may not pay for the benefits, policymakers may prefer to finance retirement income programs in a manner that minimizes the degree of inter-generational transfer. However, to the extent that this risk can be minimized in other ways, for example, by reducing the promised level of benefits, dependence upon such transfers may represent sound public policy.

2. **How should the costs of the retirement income programs be shared among different age and income groups?** The specific type of funding method used by each program determines the allocation of retirement costs over time and thereby affects the level of annual costs. However, within any period, different financing mechanisms may allocate the costs assumed by each age group or income class in different ways. Shifting an individual's share of costs does not change the real costs, but may affect one's perception about the affordability of any given annual cost. For example, using general tax revenues to finance part of Social Security benefits may appear to reduce costs; however, it merely shifts the burden to a different group of people. As a result, decision makers will have to examine how to distribute the annual costs of retirement programs. To illustrate, some alternatives might include:
whether workers should contribute a larger share of the costs of employer-sponsored programs;

whether general revenues should support OASDI program costs;

whether there should be gradual deferral of benefit commencement age;

whether benefits should be subject to income tax; and

whether worker contributions should be exempt from income taxes.

The possibility that some approaches for financing benefits can create adverse economic consequences such as lower productivity, inadequate saving rates or an overly regressive tax burden requires that decision makers also examine these broader economic impacts.

3. Who should bear the risk of inadequate program funding? As suggested above, all retirement programs possess some risk that retirees may not receive promised benefits. Previous public policy measures such as ERISA attempted to reduce this risk for participants in private plans by establishing minimum funding standards and by providing benefit guarantees supported by the Pension Benefit Guaranty Corporation. However, decision makers will have to address whether these policies unnecessarily increase the costs for plans with sound sponsorship while providing limited benefits to participants in plans with weak sponsorship and little ability to improve their funding position. In addition, decision makers will have to assess:

whether public employee programs possess any significant risks, and whether alternatives like the establishment of minimum funding standards provide benefits that can be justified by the higher current costs to taxpayers; and

whether recent evidence of potential OASDI funding inadequacies threatens the soundness of the program.

Although retirees in the next few years will undoubtedly receive promised benefits, some risk exists for current workers who would like to retire after the turn of the century. The combination of higher payroll taxes and lower benefits does not assure workers' confidence in the system.
Addressing these financing issues will permit decision makers to evaluate alternative methods of paying for retirement benefits and to determine whether we can afford them. In addition decision makers will have to assess how current and proposed financing mechanisms affect the performance of the economy, especially through their effects on savings rates, productivity and inflation.

F. KEY QUESTIONS FOR RESEARCH AND ANALYSIS

A set of key questions outlined in this section provides a practical framework for analyzing the complex policy issues raised in the three broad categories above.

The specific questions in the framework include:

- **What specific policy issue does the proposal address?** Each proposal should address an identifiable problem or issue within the policy framework presented above. For example, decision makers must understand whether a proposal such as simplified employer pensions is primarily intended to expand opportunities for receiving a retirement benefit or to increase the level of benefits.

- **What related proposals address the same issue?** Addressing this question helps to ensure that a specific policy proposal is evaluated not simply on its own merits, but, more importantly, in relation to other alternatives that could achieve the same objective. Sound public policy requires the selection of the most appropriate alternative, not simply any alternative which improves the status quo.

- **What fact questions should be answered to permit making a sound policy decision?** Most policy issues are ultimately resolved on the basis of value judgments or political preferences. However, identifying those elements of an issue that can be addressed by knowing the facts will appropriately focus the debate on the area of judgment. Although not all questions can be readily answered, not all proposals require immediate action.
• Can we answer these questions? If not, over what period and for what cost can we answer them? The range of potential costs and time required to address fact questions properly may affect the timing of a particular decision. It may also indicate whether we can ever adequately answer certain key questions. Where such empirical limitations exist, policy decisions should recognize them.

• What specific benchmarks must the methodology for answering these questions meet? The major criteria for evaluating the quality of specific research and analysis should be established before it is undertaken. Emphasizing precision here will ensure that the results of individual research contribute productively to a resolution of the issues.

• What are the potential costs and risks either of waiting too long to decide or of deciding in advance of having the answers? The potential risks of postponing decisions or of acting too quickly should be carefully weighed. This approach would also help to set the appropriate time frame for deciding each issue.

• What alternatives may be foreclosed either by early action or delay? It is important to understand whether a proposed time frame limits the policy choices available.

• Aside from the broader merits of a policy decision, do the costs or effects of implementation argue against selecting a given policy? Practical implementation issues should be weighed along with the broader policy issues.

Answering these questions should serve several purposes. First, proposals will be categorized according to whether they address problems of retirement income adequacy, the mix of retirement programs, or of who will pay the costs. This will provide an opportunity to evaluate each initiative in relation to other proposals addressing the same or related issues. Moreover, identification of the specific research required for a decision will permit an integrated analysis of related issues.

In addition, these questions should promote a review of the potential long-range side effects and the broader economic implications of the proposed initiatives. Evaluation of time and cost tradeoffs not only
facilitates setting priorities for research projects but also provides some basis for assigning priorities to the policy agenda itself. Finally, an explicit recognition of implementation issues should prevent the adoption of theoretically sound, but practically unworkable solutions.
A third ingredient to effective evaluation of material used in making decisions on retirement income policy is a determination as to the adequacy and completeness of the material presented.

Many groups have proposed new initiatives in the retirement income area and various public commissions and advisory councils, such as the President's Commission on Pension Policy and the Task Force on Universal Social Security Coverage, will present their proposals in the early 1980s.

As decision makers turn to specific proposals, it is frequently difficult to ensure that the appropriate questions are asked and answered, and that proposals are addressed in a sequence that corresponds with their urgency. More importantly, initiatives that may have large direct or indirect effects must be analyzed in enough detail so that major policy mistakes are avoided.

For example, subsequent analysis of the 1972 Amendments to the Social Security Act indicated the existence of a costly technical error in the amendments' benefit indexing method. During the period of high inflation of the mid 1970's, this indexing approach overcompensated workers for inflation and held out the prospect that future Social Security benefits would rise well above intended levels. Because of the substantial impact on program costs, Congress approved a change in the benefit adjustment mechanism in the 1977 Amendments to the Social Security Act. This
example illustrates the importance of careful analysis of significant changes before the proposals are adopted.

This chapter reviews many of the major proposals affecting retirement income policy and attempts to identify the specific questions that need to be answered so that we can assess the adequacy of our current knowledge about each group of initiatives and identify areas where further research would be beneficial. We also establish standards which the methodologies for this research should meet to ensure that it will provide a timely and useful basis for decision-making. In addition, we review the potential consequences that might arise from a failure to answer specific questions well or from a delay in answering others.

B. INITIATIVES AFFECTING RETIREMENT INCOME LEVELS

Recent proposals affecting retirement income levels cover a broad range of benefit provisions and raise a series of important fact questions that must be answered if decision makers are to select appropriate alternatives. A number of these proposals would change the level of benefits available to individuals during retirement. Other initiatives would change the age at which individuals would be eligible for retirement benefits. To illustrate the types of initiatives under consideration, this discussion will address proposals affecting policy in the following areas:

- indexing retirement benefits
- improving survivor benefits
- adjustments in Social Security benefits and eligibility age
- changes in military retirement benefits
- changes in the mandatory retirement age

This section reviews the initiatives, identifies specific questions which might be addressed, reviews a set of analytical standards for
consideration in answering these questions and identifies the potential consequences of failing to answer these questions.

1. Policy Initiatives

Five specific proposals are representative of the types of proposals under consideration to change retirement income levels. These initiatives include:

- **Indexing private pension benefits.** Proposals in this area have been suggested to relieve a perceived economic hardship imposed on some retirees by high rates of inflation that erode the purchasing power of fixed annuity benefits over the course of retirement. Some would require private pension plans to increase benefits to retirees each year in line with changes in an index that reflects price changes occurring during retirement.

- **Changes in survivor benefits.** Concern that private plans do not provide adequate benefits to survivors of deceased participants has resulted in proposals to increase the generosity of joint and survivor options. Under proposals to increase the value of post retirement options, plan sponsors would no longer be allowed to actuarially reduce the retirement benefit to a retiring worker who receives a joint and survivor benefit. Proposals to increase the availability of pre-retirement survivorship protection would require plan sponsors to extend to all vested workers the same type of joint and survivor options that currently must be made available to workers who have reached the earliest retirement age of the plan.

- **Changes in Social Security benefits and retirement age.** Many of the proposals to change Social Security benefits are intended to eliminate perceived inequities in the current benefit structure. For example, because a supplementary benefit is automatically provided to retirees' spouses who have little or no covered workforce experience, single earner couples can receive a higher return on their contributions than dual earner couples with exactly the same family income. Elimination of the automatic spouse's benefit in favor of alternative mechanisms for meeting the retirement needs of full-time homemakers has been suggested to correct this inequity. Changing the Social Security retirement age has been suggested as a way to reduce or
eliminate the long run deficits that are projected for the system. Such proposals would gradually increase the age at which Social Security benefits are payable.

- **Changes in military retirement benefits and retirement age.** Because of the high cost of providing retirement benefits to military personnel who retire early enough to establish full second careers (usually mid-40's) major changes to the military retirement system have been proposed. These changes would alter the benefit schedule for military retirees and establish an age for receipt of benefits that is consistent with the retirement ages of other federal employee retirement plans.

- **Extending mandatory retirement beyond age 70 and requiring benefit accruals beyond age 65.** These changes have been suggested to provide greater flexibility in the timing of retirement by eliminating potential barriers to continued work. The permissible mandatory retirement age would be eliminated or extended beyond age 70 and private retirement plans would be required to accrue benefits for employment after age 65.

2. **Key Questions**

In order to evaluate proposals to change retirement income levels or retirement ages, decision makers will have to address key questions that indicate the potential need for these initiatives, as well as their potential benefits and costs such as the following:

- **What are the necessary levels and patterns of living expenses during retirement?** In order to formulate retirement income goals, decision makers need to know what retirees' living expenses are and how they change over time. However, addressing this question is complicated because:
  
  -- retirees' actual expenditures may be heavily affected by the level of income available; thus, data on actual retiree expenditures may not adequately identify minimum living expenses during retirement;
-- an individual's living expenses may change during retirement so that a profile of living expenses for the average retiree may not reflect the living expenses actually faced by retirees who are significantly older or younger than the average age; thus, the changing pattern of living expenses during retirement may not be adequately captured in available studies that focus on the average retiree;

-- the expected level of living expenses may be heavily affected by the relative costs of essential purchases in different areas of the country; thus, the extent to which relocation after retirement affects living expenses should be reflected in studies of changes in retiree cost of living; and

-- the level of retirement living expenses may be heavily affected by the availability and use of services and programs that meet retirees' needs at reduced expense; thus, the degree to which living expenses are reduced by special programs should be reflected in the estimates of living expenses.

• **What income is available to individuals during retirement?**

In order to assess the adequacy of benefit levels under existing retirement programs, decision makers need to know what income and personal resources are available to individuals for meeting living expenses. Specifically, retirement income estimates should reflect:

-- all retirement program payments including Social Security and pension plan benefits as well as related benefits such as Supplemental Security Income, Medicare, and others;

-- funds available from other sources as well, including personal savings, life insurance proceeds and real estate;

-- the level and pattern of both income and assets during retirement for specific cohorts of retirees;

-- patterns of income for current retirees as well as the expected patterns for current workers when they are likely to retire; and

-- levels of income and assets available after payment of taxes and other obligations.
• **How is the comparison of retirement expenses and incomes affected by using the family or household rather than the individual as the unit of measure?** With the increasing prevalence of dual earner households, it becomes important to assess the adequacy of retirement income in relation to the expenses and income of the entire household. Specific aspects of the question include:

  -- whether the availability of a second source of earnings or pension income during retirement has a significant impact on retirement age and the adequacy level of benefits for individual members of dual earner couples; and

  -- how retirement living expenses and income change with the death of a spouse.

• **What are the recent patterns of worker retirement age?** Public policy can influence the retirement decisions of workers in several ways. Changes in mandatory retirement ages and changes in pension benefits are two significant approaches for influencing retirement decisions. In order to evaluate various policy alternatives, decision makers will need a better understanding of how current policies have affected retirement, starting with information on recent historical retirement patterns. Specific aspects of this question to be addressed include:

  -- the influence of health status on retirement decisions at various ages;

  -- the types of workers most likely to retire early and at normal retirement; and

  -- the degree to which changes in retirement age patterns affect program costs.

3. **Analytical Standards**

   In seeking to answer the key questions identified above, decision makers should be cautious about the data bases and methodologies used. This section identifies some of the potential problems associated with the use of currently available data and establishes a number of
analytical standards intended to improve the direction and quality of future research.

- Retirement living expenses. Future studies of living expenses during retirement should seek to use available data to:
  -- estimate the expenses associated with essential items in major regions of the country;
  -- estimate the pattern of these expenses over time for specific cohorts of retirees; and
  -- estimate potential offsets to living expenses afforded by special programs.

Careful use of existing CPS and BLS cross-sectional data can provide a preliminary basis for making some of these estimates but the profile of retiree expenses over time cannot be obtained from these sources. Future survey data can be helpful as long as annual living expenses are not interpreted solely on the basis of the level of income available.

- Retirement Income. To the maximum practical extent, all sources of actual and potential income should be included in an analysis of retirement income levels and patterns. This may be difficult to accomplish with existing cross-sectional data. Even if it could be done for current retirees, it may not be helpful in predicting future patterns. For example, one drawback to the Retirement History Survey (RHS) data is that it includes retirees who worked during a period when retirement programs were not as prevalent as they are today. Thus, there may be greater value in initiating a longitudinal study of a new group of older workers than in continuing to follow up with the previous group. Although the National Longitudinal Survey (NLS) does provide information on a sample of older men, the data are not collected for women of the same age group.

Retirement income data from individual programs can be obtained from program sources, such as plan actuarial reports, Form 5500 reports to the Department of Labor, and Bureau of Census data on public plans. However, a major gap is our lack of knowledge concerning the availability of personal assets and the rate at which these assets may change during retirement. Surveys that seek to obtain this information must cover a sufficient period of review to
ensure that annual income and the change in assets over time can be established. NLS data may provide a guide, but a broader sample is needed.

- **Retirement Age Patterns.** Previous studies have established the importance of health status and retirement benefit levels on the age of retirement for most retirees. Most of these studies have drawn heavily upon the Retirement History Survey and the Current Population Survey. However, other sources of data should be included in future studies of retirement age in order to improve upon previous estimates. Specifically, pension plan data on retirement age experience, the Survey of Income and Education (SIE) and the Health Interview Survey (HIS) provide significant improvements in our understanding of retirement income and health status for older workers and retirees and should be used to supplement other data.

4. **Potential Consequences**

Decision makers should be sensitive to the potential consequences of adopting individual policies without adequate analysis such as the assumption of unanticipated costs or the foreclosure of specific policy choices in the future. Some of the potential consequences that might arise from policy changes affecting retirement benefits include:

- **Potentially infeasible benefit objectives.** The level of benefits necessary to prevent economic hardship in retirement may be more costly than what individual plan sponsors or society as a whole is willing to pay. Establishment of infeasible benefit objectives creates the potential for a loss of confidence in an otherwise sound system of providing retirement income. It also exposes individuals to the risk that anticipated benefits will be reduced or eliminated at some future time when their capacity to adjust is limited.

- **Disincentives to labor force participation.** Because the availability and adequacy of retirement income benefits are important factors in the retirement decision, the structure of retirement benefits will affect the supply of labor. An imbalance between wage and retirement income or a poor selection of benefit eligibility ages may induce productive individuals to withdraw from the labor force. Such a reduction in the relative size of the working population
could lower the productive potential of the economy and slow overall economic growth.

• Abuse of subjective eligibility criteria. Subjective benefit eligibility criteria such as health status are more difficult to apply than objective standards such as age or service. The potential for differences in interpretation of general standards and variation in enforcement practice among plans creates the possibility for adverse selection. Significant abuse might greatly increase program costs and undermine support for the system.

These concerns reflect the importance of some caution in addressing initiatives to change retirement income levels. In addition, they suggest the importance of additional research before making these decisions.

C. INITIATIVES AFFECTING THE MIX OF RETIREMENT PROGRAMS

The policy proposals in this area typically emphasize expanding opportunities for workers to earn a retirement benefit, rebalancing program emphasis on the role of retirement benefits as deferred compensation or as a transfer of income, and eliminating gaps and overlaps among different programs. Specific examples of these proposals include:

• expanded pension plan coverage and participation
• universal coverage under Social Security
• expansion of IRA's and SEP's
• changes in Social Security integration rules
• worker supplementation of retirement benefits
• establishment of shorter vesting periods or full portability requirements
Many of these initiatives raise specific fact questions about the need for additional opportunities to save for retirement. After reviewing the initiatives in some detail, this section identifies several key questions to be addressed in considering initiatives to adjust the mix of retirement programs.

1. Policy Initiatives

The current agenda of policy proposals affecting the mix of retirement income programs focuses heavily upon expanding coverage where gaps exist and reducing overlaps where duplication occurs. In addition, it provides opportunities for rebalancing the emphasis that programs place upon the role of retirement benefits as a form of deferred compensation or income transfer. The following initiatives are representative of the range of these proposals:

- **Expanded coverage and participation.** Proposals for expansion address a perceived need for plan membership opportunities among segments of the workforce that are currently excluded. These proposals vary widely in the approaches suggested to encourage broader coverage, ranging from the use of tax incentives to the mandatory provision of retirement plans by all employers and a change in minimum participation standards.

- **Universal Social Security coverage.** This proposal has the dual objective of guaranteeing that all workers are provided the same basic level of retirement income and eliminating instances in which employees who work primarily in uncovered employment qualify for Social Security benefits through brief employment in a second career. The proposal focuses primarily on excluded public employee groups and would make participation compulsory for all public and private employment.

- **Expanding participation in Individual Retirement Accounts (IRA's) and Simplified Employee Pensions (SEP's).** Proposals for expanding these arrangements have been suggested to encourage retirement saving by more individuals, regardless of whether they work for firms that sponsor retirement plans. Some initiatives are also concerned primarily with
increasing the limits on allowable tax deductible contributions to IRA's and SEP's.

- **Changes in Social Security integration rules.** Concern has arisen that integration rules may effectively prevent lower income earners from supplementing OASDI through private plans because of the high level of Social Security offset currently permissible. Proposals to reduce or eliminate allowable integration have been put forward to address this perceived problem. It could be argued, however, that present rules are too restrictive and that the total benefit from private plans and Social Security unduly favors lower income earners and discriminates against middle income and higher earners.

- **Worker supplementation of retirement benefits.** Proposals to emphasize greater reliance upon individual savings have been suggested to improve the flexibility of the current retirement income system. Proposals to accommodate individuals who wish to supplement private plan benefits would provide favorable tax treatment for voluntary employee contributions to the plan or to a supplementary IRA.

- **Shorter vesting periods and full portability requirements.** Such proposals are intended to extend the potential for receiving retirement benefits to a broader group of workers and to make it easier for mobile workers to earn a retirement benefit. Reducing minimum vesting standards from current requirements has been suggested to permit more employees to earn vested benefits sooner. Portability also would help mobil workers. One portability proposal would require qualified pension plans to contribute amounts associated with separated worker's accrued benefits to a common fund for subsequent payment to retirees.

This group of initiatives represents a broad effort to rebalance the mix of retirement programs available to different segments of the population. Although these initiatives primarily affect the mechanisms for earning retirement benefits, there are clear implications for the ultimate level of retirement benefits and the overall costs of these programs.
2. **Key Questions**

In order to evaluate these initiatives, decision-makers will need to address a series of questions that establish the magnitude of the potential gaps and overlaps under the current mix of programs, and the degree to which individual proposals address the problems. Such questions include the following:

- **What groups of the population currently lack retirement plan coverage and participation?** To assess the adequacy of current coverage and participation, the decision-maker will first want to know which groups of workers and other individuals lack participation either:
  - due to the lack of a plan available to workers; or
  - due to their current ineligibility for an existing plan.

In addition, it will be important to understand how previous policy changes may have changed coverage and participation of these groups and the degree to which these estimates are likely to change in the absence of any new initiatives.

- **Does the existence of these gaps significantly affect the opportunity of these workers and households to accumulate retirement benefits?** For example if the prevalence of pension plan participation among workers over age 25 is relatively high, extending participation to those under 25 may have only a minimal impact on these workers' welfare since they would likely have become participants after age 25 anyway. As a result, a prospective analysis of current worker characteristics will be required to estimate the percentage of workers who ultimately can be expected to have the opportunity of accumulating benefits. In addition, worker characteristics must be related to household data to determine the proportion of the population not likely to be permanently associated with the workforce but nevertheless protected by a pension plan on the basis of the expected participation of a family earner.

- **To what extent are current pension and profit sharing plans integrated with Social Security?** To understand the potential impact of changes in integration rules, the decision-maker will want to know the proportion of current
and potential retirees that may receive retirement benefits that are integrated with Social Security benefits. In addition, to understand the need for any rebalancing of welfare and compensation concepts under the current mix, one will want to know the magnitude of benefits that are offset or adjusted as a result of the operation of these rules. Finally, it will be important to examine the extent to which alternative rules may affect these estimates in the future.

- **What groups of participants are either not fully vested now or not likely to become fully vested?** To assess the potential impact of initiatives that seek to reduce vesting requirements, one should understand the characteristics of those participants who either are not currently fully vested or are not likely to become so under current vesting rules. A second question concerns what proportion of workers apparently forfeit benefits as a result of voluntary and involuntary withdrawal under current and alternative vesting requirements. Finally, although more difficult to do with precision, it would be important to establish the potential effects on labor force mobility and productivity of previous adjustments in vesting provisions.

3. **Analytical Standards**

In addressing the questions above, there are a number of potential pitfalls in the use of available data and previous methodologies. This section reviews a number of these concerns and establishes criteria for evaluating the quality of research.

- **Coverage and Participation.** In order to obtain reliable estimates of coverage and participation, it will be important to distinguish between primary and supplemental plan memberships so that an unduplicated estimate of participation can be obtained. In addition, it will be important to establish these estimates for different points in time so that the underlying historical trends can be determined. At a minimum these estimates should be based upon the 1972 and 1979 Current Population Survey supplement addressing coverage and the 1977 and earlier Bureau of Labor Statistics (BLS) Expenditures for Employee Compensation survey addressing firms with pension plans. Finally, this analysis should relate estimates of the proportion of covered and participating workers in relation to workforce estimates that correspond with realistic expectations of the
characteristics of covered workers. For example, using the minimum participation standards established by ERISA as a guide, participation should be related to the proportion of the total workforce over age 25 with more than one year of service.

- **Integration.** In order to address the questions above, one would want to utilize benefit payment data based upon a sample of plans for which knowledge of integration provisions could be established. For example, the use of a plan sample based upon carefully edited 5500 form data supplemented by Summary Plan Description (SPD) information might provide a basis for these estimates. Alternatively, data obtained from a sample of plans with annual actuarial reports would also provide a potentially reliable source. Caution should be used in applying population survey results because these sources typically do not include integration provisions and because individuals frequently do not understand the rules actually in force. However, the use of matched record data bases such as the Retirement History Survey matched with Social Security records may be useful.

- **Vesting.** To understand the characteristics of participants who are not currently vested, one would need to know the age and service characteristics of the affected workers and the period of time for which the current vesting rules have been in effect. This would permit the estimation of the maximum potential number of vested workers for a plan with a given set of characteristics. Although information on vesting provisions is generally available from the cautious use of the 5500 form data, age and service distributions are not readily available. Thus, the use of representative distributions might provide the only approach currently available for making these estimates.

4. **Potential Consequences**

There may be substantial risks in the failure to examine key questions with appropriate care. Decision makers should be sensitive to the following potential consequences of inadequate analysis:

- **Overburdening of the retirement system.** Private retirement plans are financial intermediaries specifically designed to accommodate the retirement saving needs of individuals with a long-term attachment to the labor force. However, not all
individuals have needs that can be served through this mechanism, such as those who do not participate in the labor force or do not have sufficient income to accumulate personal savings. Extension of private retirement coverage as a means of providing anticipated income needs of the entire future aged population may fail to address the actual needs of significant groups in the population. Alternatively, attempting to provide the types of services required by such groups through a system not designed for these purposes is likely to be both inefficient and ineffective. Overextension of the retirement system's capabilities may undermine its potential for rendering the services for which it is designed.

- **Adverse competitive impact.** Requiring universal plan coverage would not have a uniform impact on all employers. Differences among firms in financial status and the size and composition of their workforces may make provision of a pension plan relatively more burdensome for some firms than others. For example, to the extent that the costs of plan administration operate to the disadvantage of firms with relatively smaller workforces, requirements for private plan provision may drive a competitive wedge between large and small firms and create adverse effects on new business formation, jobs and wages.

- **Adverse effects on benefit levels.** Vesting periods and integration rules limit plan sponsors' costs for certain groups of employees and may permit the provision of a retirement benefit to new groups. However, if workers most affected by these plan provisions would have ultimately received adequate retirement benefits anyway, either through long-term employment with a subsequent employer or through Social Security, eliminating or reducing vesting periods and integration rules may be an inappropriate method of ensuring benefit adequacy. Sponsors may simply offset the higher costs of providing benefits to new groups of workers by reducing benefit levels to all workers.

D. **INITIATIVES AFFECTING WHO PAYS FOR RETIREMENT BENEFITS**

The group of initiatives presented below illustrates the wide range of proposals suggested regarding the financing of retirement income programs. Although a number of the initiatives are concerned with establishing reasonable guidelines to reduce the risks of potential
benefit loss for participants, others relate to changes in the way plan assets are collected and managed. This section provides a discussion of each initiative, including:

- public employee plan funding standards
- book reserve funding methods
- multiemployer plan termination insurance (PBGC)
- Social Security payroll taxes
- index bonds and related securities
- eliminating favorable tax treatment for private plans

After reviewing the characteristics of these proposals, this section addresses key analytical questions, the standards to be applied in answering them and the potential consequences of inadequate attention to them.

1. Policy Initiatives

Suggested proposals that would alter the way in which different retirement programs would be financed and funded. They can generally be considered as a separate set of initiatives, although they may be accompanied by proposed changes in the level of benefits or the mix of programs. This section reviews several proposals that are typical of recent suggestions.

- **Public employee plan funding standards.** These proposals address a growing concern that some public employees' benefit security may be jeopardized if future generations of taxpayers are unwilling to pay retirement plan costs that have been deferred as a result of inadequate funding. Advocates would require public employee plans to conform to minimum funding standards. However, specific proposals differ about whether the funding requirements need to be as rigorous as those applied to private plans.

- **Book reserve funding methods.** Book funding addresses a perceived need for greater financial flexibility in funding pension plans. This would occur by permitting plan sponsors to finance plan operations out of the cash flow, which,
under a funded system would have been earmarked for a segregated account. In lieu of funding a segregated account, companies would treat pension benefit obligations as a corporate financial liability and place them on corporate balance sheets. The general assets of the firm would implicitly provide security for benefit claims. To provide additional security to plan members the government would provide a guaranteed insurance program that pays benefits in the event available corporate assets are not adequate.

- **Multiemployer plan termination insurance.** Modifications to the PBGC insurance program have been proposed to eliminate an unintended potential for adverse selection inherent in the program's current design. Proposals would bring the program more in line with fundamental insurance principles by shifting the emphasis from insuring plan terminations (which may be voluntary events) to insuring insolvencies and by relating PBGC insurance premiums to the risk inherent in insuring an individual plan.

- **Social Security payroll tax.** Changes in scheduled payroll tax increases have been proposed for two quite different reasons. On one hand, it has been suggested that because the immediate impact of a payroll tax increase is an effective increase in labor costs, increases in Social Security taxes may contribute to a worsening of inflation that cannot be supported at this time. Following this argument, some have proposed postponement or cancellation of scheduled increases with needed revenues being provided by a value added tax, transfers among the trust funds and/or general revenues. However, others have argued that additional increases in the current payroll tax are necessary to develop a fund of assets in anticipation of future revenue shortfalls. Advocates of this position have proposed that the payroll tax be increased more rapidly than currently scheduled.

- **Index bonds.** The use of index bonds has been proposed to provide pension funds an investment vehicle that keeps pace with inflation. Private firms which have demonstrated an ability to realize positive real rates of return during inflationary periods and which have substantial requirements for debt capital would be encouraged to issue debt with an obligation to pay the greater of a specified nominal rate or a specified real rate of return. Alternatively the federal government could be the issuer of the bonds.
• **Elimination of pension plan tax advantages.** This proposal has been suggested by some who feel that the magnitude of the federal tax revenue loss may not be justified by the additional savings generated by private pension plans. Others suggest elimination of favorable tax treatment on the grounds that these revenues should be used to improve benefits under the Social Security program. Proposed changes would require that employer contributions to retirement plans and earnings on retirement fund investments be taxed as income to the plan participants in the year that they accrue.

2. **Key Questions**

These policy initiatives raise a number of important questions that need to be answered if decision-makers are to evaluate the effects of different proposals. These questions include:

• **What groups of workers have a substantial risk of failing to receive benefits due to funding inadequacies?** Although not strictly a factual question, it requires some analytical attention because of its importance in determining the need for more stringent funding standards. By using different measures of risk, it would be possible to identify those groups of workers and retirees with substantially greater risk than most of losing benefits in:

  -- **Private employee pension plans**, where workers in poorly funded defined benefit plans could be identified using measures of the number of retirees, trends in active participation, plan age, unfunded liabilities and other factors;

  -- **Public employee pension plans**, where workers in poorly funded plans could be identified using measures of contributions in relation to the tax base, trends in local population, unfunded liabilities and other factors; and

  -- **Social Security**, where patterns of declining individual rates of return or significant increases in the payroll tax may signal the reluctance by taxpayers to support previously promised benefits.
Addressing these questions would not only provide a basis for reassessing the adequacy of current protections for retiree benefits, including minimum funding standards and plan termination insurance, but would also provide a baseline for evaluating proposed changes.

- **What groups of the population currently bear the costs of retirement income programs?** A major question for analysis concerns who currently pays for existing retirement income programs. This question must be addressed in two stages:
  - first, how are these costs distributed over time, including between generations?
  - second, how are the annual costs distributed across different income and regional population groups?

Although quite complex, this question requires careful attention to the net tax effects resulting from the interaction of income taxes, corporate taxes and payroll taxes as well as to direct contributions, interest on funds and private savings.

- **What has been the historical pattern of pension fund investment performance?** This question will provide a basis for determining whether pension funds have historically been able to achieve annual rates of return in excess of the rate of inflation. To the extent that pension funds have been unable to do so, this question would determine whether this occurred because:
  - no securities were available to permit funds to achieve the required rates of return, or
  - the fund managers simply picked the wrong investments.

The answer to these questions will provide a basis for assessing the need for alternative investment vehicles.

- **To what extent has funding of retirement benefits affected overall saving and capital formation rates.** Addressing this question will permit decision makers to assess whether minimum funding standards for defined benefit plans would have a generally positive or negative effect on capital formation and provide a basis for evaluating whether preferential tax treatment of Social Security and private and public employee retirement plans is justified on the basis of net addition to saving. It would also require an
assessment of whether other factors (such as demographics) may be more responsible for recent trends in saving patterns.

3. Analytical Standards

In addressing these questions, there are a number of important analytical criteria that will help to ensure sound results. This section reviews these analytical benchmarks by which the quality of the results can be judged.

- Funding Trends and Status. In evaluating the funding trends and potential risk among different types of retirement programs, it will be important that several factors be considered:

  -- in private pension plans, it will be important to distinguish between defined benefit and defined contribution plans and to use data from a sample of plans over a recent period of time; such a sample could be based upon careful editing of 5500 form reports or upon a direct survey of pension plans themselves;

  -- in public pension plans, the available data is somewhat less reliable; however, three sources could provide a reliable starting point for assessing funding status: 1) the Bureau of the Census bi-annual report on the Finances of Employee- Retirement Systems of State and Local Governments; 2) also from the Bureau of the Census, the census of governments report on Employee Retirement Systems of State and Local Governments published every 5 years; 3) the information collected by HUD under their current pension project; however, even these sources would have to be checked against available public reports for the larger systems or the House Pension Task Force results;

  -- in Social Security, it will be important to use a demographic based model to estimate the rates of return that different generations can expect from Social Security and the points in time at which payroll taxes would be required to change significantly; although these measures do not directly measure the program's risk, they help to
identify when future generations may simply resist tax increases to support promised benefits.

- **Costs of Retirement Programs.** Answering this question will permit an assessment of whether the current programs are affordable in the aggregate and whether specific groups of the population bear a disproportionate share of the costs. This analysis will require an analysis of how a recent period's annual costs were distributed across income groups, with careful attention to the actual tax rates paid by individuals and households. Although it may be difficult to estimate precisely the incidence of costs across all income groups, an alternative approach would employ the use of prototypes that reflect typical households from each income group.

- **Pension Fund Investments.** The average rates of return depend directly upon the periods of time used to measure results. Periods which emphasize the pre-1960 period may place undue weight on a timeframe of relatively low returns. Similarly, periods which emphasize only one economic cycle (e.g. 1970-75) may also prove misleading. Thus, an important comparison is how pension funds have performed relative to inflation over the periods of time required for sound plan funding.

- **Funding and Saving Effects.** Economists do not currently agree upon whether the existence of programs specifically designed to foster saving for retirement affects individuals' saving initiative. As a result, we do not know whether the assets accumulated by private and public employee plans represent a net increase in aggregate saving or merely a shift in savings from other types of financial intermediaries. The use of available longitudinal data do not permit a conclusive result. Consequently, although we can measure the magnitude of potential taxes foregone under the federal tax treatment of Social Security and private and public employee plans, we are not yet capable of quantifying the impact on savings rates. However, two types of analysis of saving rates are possible. First, by using recent patterns in age and household specific saving rates, one could at least estimate the change in aggregate saving rates that has been due to demographic patterns and the extent to which these estimates may change in the future. Second, by estimating the approximate change in contributions and tax rates that have resulted from more stringent funding standards, one could obtain an estimate of the potential impact of these standards on saving rates.
4. Potential Consequences

There are a number of potential consequences that could result from a failure to examine key questions including those identified above. Specifically:

- **Unsupportable distribution of annual costs.** Workers' and taxpayers' potential resistance to continuously increasing annual payments required to finance retirement programs can be aggravated by an inequitable distribution of costs. A distribution of costs which seriously disadvantages large groups in the population may magnify the perceived cost burden or seriously erode support for some or all retirement programs. Moreover, if considerations of equity of return and ability to pay are not carefully balanced, an otherwise affordable level of costs may be distributed in a way which makes it unsupportable.

- **Unwarranted cost burden for current generation.** Amortization of existing unfunded liabilities in both the public and private sectors would be borne most heavily by the generation of workers entering the labor force at the current time. Such an uneven intergenerational distribution of costs may cause an erosion of support for the retirement income system that could be avoided by a smoother distribution across generations. Moreover, current workers may be unwilling to pay a high level of expenses thereby jeopardizing rather than ensuring benefit security.
CONCLUSION

This report, as an individual document, offers valuable techniques for effective evaluation of information upon which retirement income policy decisions are based—whether they involve narrow or broad issues.

The evaluation techniques provided are intended to promote precision in defining terms used to describe problems, in identifying basic issues underlying problems, and in determining whether available information is complete. The techniques have been discussed separately, but each within the same general framework which provides a context for consideration of narrow or broad issues and decisions. The framework divides the issues into three broad categories involving goals, strategy, and cost and feasibility of retirement income policies. Specifically, the categories cover issues concerning what retirement income levels should be, what mix of the various retirement programs should be used to achieve the goals, and who should pay for the retirement programs.

Careful evaluation of input is an essential step in the development of effective solutions to problems. This report is designed to help decision makers assure themselves that real problems have been identified, related issues have not been ignored, and available information is adequate and thorough.

Considered together with other EBRI reports, this report should help to provide a sound foundation for the development of feasible responsive solutions to retirement income policy issues. By helping to articulate research needs, it contributes to the most efficient use of the resources that will be spent in the coming years on developing a comprehensive approach to filling this nation's retirement income needs.
Employee Benefit Research Institute

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